WO 20051054743 **PCT/GB2003/005216** CLAIMS

- A water ingress detection system suitable for use in indicating the ingress of water onto a pipe or vessel inside a casing, from outside said casing, which system comprises a deflector formed and arranged for securing in use, to the 5 underside of a pipe or vessel inside a casing provided thereon, a conduit coupled to said deflector for leading water away from said pipe or vessel to a water-sensing indicator device, said indicator device having at least a signal output portion disposed externally of said casing for signalling the presence 10 of water, said deflector being formed and arranged for intercepting water running along the exterior of the pipe or vessel inside the casing and diverting said water into said conduit, and said conduit and water-sensing indicator device being formed and arranged so that said water-sensing indicator 15 device can sense substantially only water intercepted by said deflector.
- 2. A system according to claim 1 wherein said deflector has a base portion, directly or indirectly, engagable by a tie device in use of the system, so as to be clamped against said pipe or vessel.
- 3. A system according to claim 2 wherein said deflector was at least one, at least part-annularly extending, flange element upstanding from said base portion.
 - 4. A system according to claim 3 wherein said deflector comprises two spaced apart, said flange elements, with a saddle portion extending therebetween.

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5. A system according to any one of claims 2 to 4 wherein at least one of said conduit and said indicator device is secured to said pipe or vessel by a support leg having a base portion, directly or indirectly, engagable by a tie device in use of the system, so as to be clamped against said pipe or vessel.

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6. A system according to claim 2 wherein said deflector has

PCT/GB2003/005216

an elongate strip portion upstanding from said base portion and having a distal end portion secured to at least one of said conduit and said indicator device, so as to support said conduit and indicator device from said pipe or vessel, in use of the

system.

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WO 20051054743

7. A system according to any one of claims 1 to 6 wherein said conduit has an enlarged diameter mouth portion for receiving water deflected from said pipe or vessel by said deflector.

- 8. A system according to any of claims 1 to 5 wherein said indicator device is releasably connected to said conduit.
 - 9. A system according to any one of claims 1 to 8 wherein said indicator device comprises a water receiving chamber containing a float movable between lower and upper positions according to the water level inside said chamber.
 - 10. A system according to claim 9 wherein said chamber has at least one window portion adjacent said upper position through which the dispositions of said float in a said upper position may be visually detected.
 - 11. A system according to claim 9 or claim 10 wherein said indicator device includes a mechanical signalling device actuatable by movement of said float from its lower position to its upper position
 - 12. A system according to any one of claims 1 to 9 wherein said indictor device includes an electrical switch device actuatable by movement of said float from its lower position to its upper position, or by water level and coupled to an electronic signalling device.

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WO 20051054743 **PCT/GB2003/005216**

13. A system according to claim 12 wherein said electronic signalling device is an audio, radio signal and/or visual signalling device.

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- 14. A pipe or vessel provided with a casing, wherein is provided a water ingress detection system according to any one of claims 1 to 13.
- 10 15. A method of warning of the ingress of water onto a pipe or vessel inside a casing from outside said casing, which method comprises the steps of:
 - a) providing a detection system according to claim 1; and
 - b) securing the deflector to the underside of the pipe or
- vessel, and the conduit and indicator device under the deflector for receiving water deflected thereby from the underside of the pipe or vessel, with the indicator device in a primed condition for activation by the entry of a predetermined level of water to the indicator device.

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